

Defense Logistics Agency INSTRUCTION

DLAI 6055.04 Effective October 22, 2015

DS-O

SUBJECT: Radiation Safety Program

References: Refer to Enclosure 1

1. PURPOSE.

- a. This instruction supersedes and cancels DLAI 4113 (Reference (a)) and updates the responsibilities and procedures for the distribution mission of radioactive commodities and radiation producing equipment in the Agency and Department of Defense.
- b. The focus of this instruction is to provide the Agency's workforce with a source of technical knowledge for managing a radiation safety program. It's use with other procedures, regulations, manuals, and guidance documents will support health, safety, and environmentally rigorous management of commodities containing radioactive material and radiation producing equipment.
- c. Adherence to this instruction improves mission needs for safety; compliance with regulations for the storage, use, distribution, and disposal of these items; and provision of orders consistent with the customers' needs.

2. APPLICABILITY. This Instruction:

- a. Applies to all DLA organizations that are responsible for managing radioactive commodities or radiation producing equipment.
- b. It does not apply to radioactive material or radiation producing equipment used for medical treatment and nuclear weapons. It does apply to radioactive material use as ancillary parts for nuclear weapons. It also does not apply to radioactive materials exempt from the regulations for a Nuclear Regulatory Commission license (Reference (b)). Control of radioactive

materials exempt from an NRC licenses are by regulatory needs. Additionally, items containing radioactive materials stored at retail and individual use levels do not present a risk to personnel or the environment to warrant the expense of managing an NRC license compliant program.

- 3. <u>DEFINITIONS</u>. See Glossary.
- 4. <u>POLICY</u>. It is DLA policy that:
- a. Radiation protection programs at DLA Primary Level Field Activities (PLFAs) be consistent and compliant, but not limited to Title 10 Code of Federal Regulations (CFR), and all applicable DoD/DLA instructions and directives. Occupational and environmental exposures to ionizing radiation will be As Low As Reasonably Achievable (ALARA).
- b. DLA organizations responsible for delivering radioactive material comply with Title 10 CFR; Title 49 CFR; Title 29 CFR Part 1910.1096 and all applicable DLA and DoD regulations and directives.
- c. PFLAs keep acceptable storage warehouses, equipment, procedures, and qualified personnel for the type and hazard of radioactive material or radiation source stored or used. Standard radiological procedures (SRPs) will post or made readily available at all approved locations.
- d. Radiological health protection policies for all DLA organizations are under the guidance from this instruction, Status of Force Agreement (SOFA) with host nations, or the Combatant Commander's policies. GOCO organizations, wherever radioactive materials or radiation sources used, stored, or shipped, uphold radiation policies under this DLAI and as prescribed by existing contracts.
- e. All PFLAs develop a Radiation Protection Program comparable to the NRC for nonlicensed radioactive material to align the Agency with the general industry and the radiological controls prescribed by the DoD and the Services.
- 5. RESPONSIBILITIES. Refer to Enclosure 2.
- 6. PROCEDURES. Refer to Enclosure 3.
- 7. <u>INFORMATION REQUIREMENTS</u>. None
- 8. <u>INTERNAL CONTROLS</u>. DLA Installation Support (DS) Directorate of Occupational Safety and Health (DS-O) conduct periodic reviews of all actions covered by this Instruction.

- 9. <u>RELEASEABILITY</u>. UNLIMITED. Approval of this Instruction for public release and is available on the Internet from the DLA Issuances Internet Website.
- 10. <u>EXPIRATION DATE</u>. We will reissue or cancel this Instruction by the fifth anniversary of its publication date. If not, this Instruction will expire on October 22, 2025.

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Enclosures

Enclosure 1 – References

Enclosure 2 – Responsibilities

Enclosure 3 – Procedures

Glossary

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ENCLOSURE 1

REFERENCES

- (a) DLAI 4113, Radiation Safety Program, September 23, 2004 (hereby cancelled)
- (b) Title 10 CFR, Part 31.5(c)(13) General Domestic Licenses for By-Product Material, Certain Detecting, Measuring, Gauging, Or Controlling Devices And Certain Devices For Producing Light Or An Ionized Atmosphere
- (c) Title 29 CFR, Part 1910.1096 Occupational Safety and Health Standards, Ionizing Radiation
- (d) Title 40 CFR, Protection of Environment
- (e) Title 49 CFR, Transportation
- (f) Title 31 CFR, General Domestic Licenses for By-Product Material
- (g) Title 41 CFR, Part 50-204 Safety Standards for Federal Supply Contracts
- (h) DLAI 4145.8, NAVSUPINST 4000.34C, AFJI 23-504, MCO P4400.105E, Radioactive Commodities in the DoD Supply System, Mar 2004
- (i) DLAI 4110, Personnel Dosimetry and Recordkeeping, Jun 2008
- (j) DoDI 6055.8, Occupational Ionizing Radiation Protection Program, Dec 2009
- (k) DoD 4715.6-R, Low-Level Radioactive Waste Program, Jan 2001
- (l) International Civil Aviation Organization, Technical Instructions for the Safe Transport of Dangerous Goods by Air
- (m) International Maritime Organization Dangerous Goods Code
- (n) International Air Transport Association, Dangerous Goods Regulations
- (o) American National Standards Institute (ANSI) 13.30, Performance Criteria for Radio-Bioassay
- (p) ANSI 13.36, Ionizing Radiation Safety Training for Workers
- (q) ANSI 13.6, Practice for Occupational Radiation Exposure Records Systems
- (r) ANSI 13.39, Performance and Documentation of Radiological Surveys
- (s) ANSI 43.17, Radiation Safety for Personnel Security Screening Systems Using X-Rays
- (t) NRC Regulatory Guide (RG) 8.36, Radiation Dose to the Embryo/Fetus
- (u) REG 8.7, Revision (Rev.) 1, Instructions for Recording and Reporting Occupational Radiation Exposure Data
- (v) REG 8.9, Rev. 1, Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program
- (w) REG 8.10, Rev. 1, Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as is Reasonably Achievable
- (x) REG 8.13, Rev. 3, Instruction Concerning Prenatal Radiation Exposure
- (y) REG 8.29, Rev. 1, Instruction Concerning Risks from Occupational Radiation Exposure
- (z) REG 8.34, Monitoring Criteria and Methods to Calculate Occupational Radiation Doses
- (aa) REG 8.36, Radiation Dose to the Embryo/Fetus
- (ab) Air Force Inter-Service Manual 24-204/TM 38-250/Naval Supply Systems Command (NAVSUP PUB) 505/MCO P4030.19H/DLAI 4145.3, Preparing Hazardous Materials for Military Air Shipments

ENCLOSURE 2

RESPONSIBILITIES

- 1. <u>Background</u>. Radioactive commodities and radiation producing equipment enter the into DLA supply chain by: (1) items regulated by an NRC licenses, or as license-exempt; (2) by authorization of the Director, DLA Logistics Operations (J-3), and unintentionally through service contracts allowing alternate materials on a performance oriented contract specification. Stock items reflect excess at DLA distribution centers when unserviceable because of age, damage, contamination, or leakage; when an item determined by the Service or agency item manager to be more than projected demands; or obsolete or superseded. Disposed of items containing radioactive material surviving reutilization or transfer as radioactive waste. DLA Disposition Services can only accept accountability of license exempt radioactive items and only on a "wash-post" basis, but not physical possession. The HQ DLA Radiation Safety Program Manager (RSPM) coordinates the final disposition of the radioactive material. Comply with the policies and instructions published by the DoD Executive Agent for LLRW and the Federal regulating agencies for disposing all radioactive material. HQ DLA has the responsibility of program oversight and technical support of the Radiation Safety Program. The PLFAs have the responsibility for implementation of the controls for radioactive materials and commodities in DLA and DoD and all extra ionizing radiation producing sources and radiation producing equipment under their jurisdiction.
- 2. <u>DLA Installation Support (DS)</u>, <u>Directorate of Occupational Safety and Health (DS-O)</u>, <u>under</u> the authority, direction and control of the Director, DS must:
- a. Ensure all DLA organizations' Radiation Health Protection Programs (RHPPs) evaluate their RHPPs to ensure compliance with applicable NRC licenses, and DLA and DoD regulations, instructions, and directives.
- b. Appoint, in writing, a RSPM assigned responsibility for the oversight and management of the radiation safety programs for all of DLA organization where applicable.
- c. Provide policy, technical support, consultation, guidance and oversight on the Agency's radiation health and protection.
- d. Launch central policies and procedures for the buying, receipt, use, storage, distribution, disposal of radioactive material and other ionizing radiation producing equipment, and management of RHPPs.
- e. Train all individuals occupationally exposed to ionizing radiation and provide personnel dosimetry where applicable.
- f. Approve personnel dosimetry service for DLA organizations wanting to use a service other than the U.S. Army Dosimetry Center (USADC).

- g. Exercise staff supervision to ensure publication and availability of control literature for radioactive commodities are available at the PLFAs.
- h. Be responsible for oversight and staff supervision of the DLA Radiation Health Protection Program for identifying, recording, and reporting of radioactive commodities.
- i. Survey the regulatory agencies to ensure prompt identification and commenting on proposed rules affecting DLA.

3. HQ DLA DIRECTORS, PLFA COMMANDERS and DIRECTORS must:

- a. Fulfill the terms of this DLAI and comply with the regulations of the radioactive materials license issued to them.
 - b. Provide acceptable personnel to carry out the DLA Radiation Safety Program.
- c. Preserve the DLA Radiation Safety Program with all applicable regulations, directives, and instructions.
- d. Identify all DLA managed items containing radioactive materials in the DLA databases to ensure the safety of all DLA employees and other users.
- e. Get and manage the necessary NRC licenses allowing the possession, receipt, storage, distribution, and disposal of radioactive material for which they have responsibility for and appoint a manager of the NRC license.
- f. Preserve applicable copies of NRC licenses approving the possession, use, storage, distribution, or disposal of radioactive material or radiation producing equipment, including all distribution centers under their area of responsibilities.
- g. Prepare a written RHPP for the type and hazard of radioactive material or ionizing radiation source managed or used, and ensure it is under the NRC license terms and conditions.
- h. Report all mishaps and or incidents involving ionizing radiation or radioactive materials under the applicable regulations and to the HQ DLA RSPM.
- i. Appoint, in writing, the Radiation Protection Officer (RPO) and Alternate Radiation Protection Officers (ARPOs) to manage the RHPPs.
- j. Get applicable NRC licenses or service authorizations by the Service or agency before a contract award.
- k. Insert special buying clauses and documentation for radioactive materials into the contracts for radioactive items.

- 1. Ensure that buying contracts compel the marking and labeling of radioactive commodities agree with Military Standard 129, Military Marking for Shipment and storage.
- m. Enter all the item data needed into the Hazardous Material Identification Resource System (HMIRS).
- n. Ensure the terms and conditions of 41 CFR, Part 50-204, Safety and Health Standards for Federal Supply Contracts are in the contracts.
- o. Coordinate all licenses, authorizations, and Service authorizations with the managing Service influenced by the NRC license.
- p. Be responsible for carrying out the controls for radioactive materials and commodities in the DLA and DoD Supply System, and other ionizing radiation producing equipment under their jurisdiction.
- q. DLA organizations owning a license issued by the NRC or NRC agreement state, may communicate directly with the NRC, or applicable state agency, on licensing matters. Coordinated all correspondence addressing licensing issues with HQ DLA before sending to the NRC, or NRC agreement state. Send correspondence introduced by a PLFA, owning an NRC or NRC agreement state license, directly to the approving authority with a copy to HQ DLA, Director, Occupational Safety and Health Office (DS-O).

4. COMMANDERS at DISTRIBUTION CENTERS must:

- a. Be responsible for compliance with the NRC license issued to their command and the terms and conditions of this instruction.
 - b. Be responsible for the overall distribution centers' RHPP.
 - c. Ensure that acceptable warehouses, equipment, and personnel are available for the RHPP.
- d. Supervise periodic reviews of local SOPs, policies, and regulations for radiation protection.
 - e. Appoint, in writing, at least one RPO and one ARPO.
- f. Ensure that all trained individuals occupationally exposed to ionizing radiation receive personnel dosimetry as stated in the NRC license and Federal regulations.
- g. Appoint, in writing, a Radiation Safety Committee to advise the Commander on all matters of radiation hazards.
- h. Ensure that no radioactive commodities are "physically transferred" to DLA Disposition Services.

- i. Ensure that disposed radioactive material is under the terms and condition of DoD 4715.6-R, LLRW Disposal Program and coordinated with the HQ DLA RSPM.
- j. Properly receive, store, and handle radioactive materials under the terms and conditions of Title 10 CFR, NRC License regulations safety and health environments, and materials-handling procedures to include inventory maintenance, segregation, and workplace safety.
- k. Ensure the RSO or RPO forwards Special Situational Reports to HQ DLA and NRC, if applicable, via the fastest possible means, to report any radioactive material emergencies, theft, or loss of control of radioactive material.
- 1. Report any loss or theft of radioactive material under the terms and conditions of the NRC License and under NRC regulations and Title 10, CFR.
- m. Provide primary and annual radiation protection, training, and specialized training for all personnel using or handling radioactive materials or other sources of ionizing radiation.
- n. Preserve occupational exposure records under DLA directives and the Special Privacy Act rules. Report personnel overexposures to radiation and anomalous radiation levels or concentrations of radioactive material, under CFR Title 10, NRC license terms and conditions and this DLAI.
- o. Provide technical information, as needed, on stored radioactive materials for review and to update the HMIRS.
- p. All individuals potentially exposed to ionizing radiation and who could potentially exceed 10 percent of the applicable limits in Title 10 CFR will wear a personnel dosimeter. Document exposure records on an automated dosimetry record or equivalent.
- q. Declared Pregnant Workers (DPW) will not amass more than 500 millirems during the entire gestation period after they have declared their pregnancy, in writing, to their supervisor. Supervisors are responsible for contacting the RPO of all such declarations, as soon as possible, and must provide a copy of the declaration to the RPO. The Supervisor must take action to limit the worker's potential exposure for the entire of the pregnancy.

5. RPOs assigned to DLA PLFAs must:

- a. Complete and manage the RHPP under the terms and conditions of the NRC license, Federal regulations, DoD directives and this instruction.
- b. Ensure that all approved distribution centers comply with the regulations for all radioactive materials, NRC licenses, radiation authorizations, or Service authorizations, and advise the commanders on all issues about to radiation safety.
- c. Conduct a periodic review of all SOPs, policies, and regulations affecting to storage, possession, distribution, and disposal of radioactive material for which they have responsibility.

d. Comply with the terms and conditions of Title 10 CFR, Part 31.5, specifying the tracking and reporting of radioactive items held under a general license issued by the NRC. This includes serial number tracking and registration with the NRC, as applicable.

6. **SUPERVISORS** must:

- a. Ensure that radiation protection needs are fulfill and complied with and within their work areas.
 - b. Train all workers of existing radiation hazards and needed procedures.
- c. Ensure that all occupationally exposed individuals receive radiological training with the type and hazard associated with performing their duties.
- d. Ensure that all occupationally exposed individuals are knowledgeable of radiological protection regulations and applicable SOPs.

7. EMPLOYEES must:

- a. Comply with all radiation safety regulations in their work environment.
- b. Be familiar with radiation hazards and SOPs before working with radioactive material or radiation producing equipment, and work only with items and procedures for which they trained for. When there is doubt about a particular procedure, seek supervisory help.
- c. Immediately report to supervisors any discrepancies in radiation protection procedures or actions which could potentially increase the radiation hazards.
- d. Immediately report any radiation incident or accident to their supervisor, emergency personnel, and the RSO or RPO.

ENCLOSURE 3

PROCEDURES

- 1. <u>Surveys</u>. Conduct routine radiation surveys under representative conditions. Survey areas where radioactive materials used, stored, or where radiation producing equipment used at the frequency mentioned in the DLA's NRC license terms and conditions and Federal regulations. Surveys performed using portable radiation detection instruments, smear, or air sampling procedures assess radiation exposure and contamination levels. Document all surveys and frequencies performed on the radiological hazard. The RPO ensure documentation complies with applicable regulations.
- 2. <u>Leak Tests</u>. Perform leak test of sealed sources under the direct supervision of the distribution center RPO and those "only approved" by the DLA NRC license for receiving or shipping purposes. Conduct leak tests conducted under and with the procedures mentioned by the manufacturer of the source, the NRC license, and Title 10 CFR.
- 3. <u>Radiological Surveys</u>. Radiological surveys performed ensure the control of radioactive material and exposure to personnel and the public are ALARA. The methods and survey performed are with the hazard expected, as mentioned in SOPs (for example, dose rate, air sample, or contamination). Performed all surveys with a qualified radiation worker.
- 4. <u>Radioactive Surface Contamination</u>. Control radioactive surface contamination to minimize the possible inhalation, personal contamination and taking in of radioactivity. The buildup of radioactivity, causing increased external exposure or production of radioactive waste, reduces the possibility of personnel contamination, and ensures control of radioactive material.
- 5. <u>Removable Contamination Surveys</u>. Perform removable contamination surveys using swipes and measured on a count-rate meter for detecting and measuring the radiation. Each NRC license list the contamination limits for removable contamination.
- 6. <u>Radiation Protection Equipment and Instrumentation</u>. Preserved the right radiation detection equipment by DLA organizations involved in the storage, use, receipt, distribution, and disposal of radioactive material mentioned in the RHPP.
- 7. <u>Survey Instruments</u>. Calibrate survey instruments as mentioned by the RHPP. Ensure DoD organizations or contractors performing calibration of survey meters licensed by the NRC or NRC agreement state to perform such services. The RPO keep copies of the calibrator's license or equivalent documentation, verifying that it meets these needs. Review calibration records for individual instruments by the RPO and keep for the current fiscal year and the 3 previous years. Source check instruments daily or before use and document and keep.
- 8. <u>Radiological Laboratories</u>. DLA organizations, having radiological laboratory analysis capacity, perform needed calibrations and quality-performance procedures with the manufacturer's specifications, recommendations, and NRC license terms and conditions.

- 9. <u>Contracted Radiological Laboratories</u>. DLA organizations contracted for radiological laboratory analysis verify the contractor's NRC or agreement state license to perform such services and copies of calibration procedures and licenses filed by the RPO.
- 10. <u>Radiation Producing Equipment</u>. Radiation producing equipment emitting ionizing radiation need policies and procedures to ensure compliance. Only properly trained personnel will manage them.
- 11. <u>Contractors</u>. Contractors performing work for DLA provide a copy of their NRC or NRC Agreement State license, including all amendments, to the commander or director of the DLA organization.
- 12. Training. The RPOs will receive:
- a. Forty hours of radiological training and experience in the safe handling of radioactive materials, and in the characteristics of ionizing radiation.
 - b. Added training to preserve competence in radiation protection.
- 13. <u>Occupational Radiation Exposure</u>. All individuals occupationally exposed to radiation will receive primary and annual training, as needed by Title 10 CFR and Title 29 CFR. This training will include:
 - a. Radiation hazards.
 - b. Biological effects of radiation.
 - c. Safe handling of radioactive material.
 - d. Potential radiation exposure.
 - e. Principles of keeping exposures ALARA.
 - f. Emergency procedures for handling radiological incidents or accidents.
 - g. Supervisors' and individuals' responsibilities.
 - h. SOPs (Standard Operating Procedures).
- 14. <u>Declared Pregnant Workers</u>. Female workers working with radioactive materials and their supervisors, will receive yearly training about protection of the embryo or fetus. Individuals will certify, by signature, that they are aware of potential radiation hazards to the embryo or fetus and understand DLA's policy for DPW. The RPO will document and preserve these training records.
- 15. <u>Title 10 CFR, Parts 19 and 20</u>. Records of training will include the name of trainee, dates of training, topics presented, duration of training, and name of instructor. The radiation protection

training provided by the RPO, ARPO, and or individuals qualified to perform such training. Preserve these records at each approved distribution center under Title 10 CFR.

- 16. <u>Visitors</u>. Tell all visitors who might frequent a radiation controlled area of the following:
 - a. Radiation hazards.
 - b. Estimate of probable exposures.
 - c. Precaution measures.
- 17. <u>Emergency Procedures</u>. Emergency Responders Personnel appointed to respond to radiological emergencies will receive annual radiation protection training. Coordinate training between the host installation radiological personnel and the RPO to ensure emergency responders receive proper training.
- 18. <u>Licenses</u>. The Commander of a DLA organization seeking use or storage of radioactive material or radiation producing equipment will:
- a. Get and manage the needed NRC license and will appoint a manager for each license issued to the DLA organization, if applicable.
- b. Ensure that NRC licensed material and DoD approved material under their control transferred to only approved personnel or organizations.
- c. Comply with their NRC license and DLAI 4145.8/NAVSUPINST4000.34C/AFJI 23-504/MCO P4400.105E, Radioactive Commodities in the Department of Defense Supply System.
- 19. <u>Storage and Handling of Radioactive Material</u>. Choose specific areas for the secure storage of radioactive materials. Restrict radioactive material from storage in the same areas with explosives, photosensitive materials, flammable materials, food products, or other incompatible materials. Restrict storage of materials containing radium or radioactive gases to well aired areas.
- 20. Exceptions to the need of (No. 19) listed above, are:
- a. Packages of radioactive material detained in shipping or receiving, awaiting disposition within 24 hours.
- b. Radioactive material is an integral part to a commodity and item (for example, trucks, cars, buses which cannot easily stored inside).
 - c. Items containing radioactive materials held in special storage as emergency stock.
- 21. <u>Storage and Handling of Radioactive Material</u>. Storage and handling of radioactive materials will be under the NRC license and DLAI 4145.8/NAVSUPINST 4000.34C/AFJI 23-504/MCO P4400.105E, Radioactive Commodities in the DoD Supply System.

- 22. <u>Physical Inventory</u>. Conduct a yearly physical inventory of all radioactive material in storage. The minimum information contain in inventory records are:
 - a. National Stock Number
 - b. Special item control code
 - c. Name of item
 - d. Quantity
 - e. Radionuclide
 - f. Radioactivity(for example, millicuries, microcuries)
 - g. Location
 - h. Status (Condition Code)
- 23. Documentation of Physical Inventory. Send a copy of the physical inventory to the DLA Distribution RSOs and RPOs of the PFLAs following completion.
- 24. Labels and Signs.
- a. Attached radiation warning signs and labels to all areas and packages containing radioactive material in storage, as needed by CFR Title 10, Part 20, unless exempted by CFR Title 10.
- b. Removed radiation labels or defaced from empty uncontaminated containers before release to uncontrolled areas.
- c. Post radioactive material storage areas with the correct signs as needed by CFR Title 10, Part 20.
- 25. <u>Building Closure</u>. The RPO will preserve all documentation under by Title 10 CFR, Part 30.35(g), as long as licensed organizations remain active. This documentation promotes an efficient and timely closure of the radiological roles at the site. Types of documents kept in the decommissioning file are:
 - a. Records of radioactive material storage areas.
 - b. Records of the annual physical inventories of radioactive stock.
 - c. Records of any spills or breakage involving the release of radioactive material.
 - d. Records of disposal of radioactive waste and disposition of radioactive sources.

- 26. <u>Closure of Licensed Organizations</u>. When licensed organizations close or when a storage area is no longer used for radioactive storage, the RPO reports this to HQ DLA (DS-O) or the RSO of record on the NRC License. The RPO performs closeout surveys for unrestricted use and send the documentation to the RSO of record on the DLA NRC license or to HQ DLA, for approval. The NRC must approve a final status report before the release or transfer of the area or organization for unrestricted use.
- 27. <u>Unrestricted use of Licensed Organizations</u>. The RPO, with support from the RSO or HQ DLA, develops a survey protocol for the release of the storage location. The protocol follows the guidance contained in the MultiAgency Radiological Survey and Site Investigation Manual, Nuclear Regulatory Guide (NUREG) 1549, and Title 10 CFR, Part 20.1402.
- 28. <u>Close Out Surveys</u>. The RSO or HQ DLA provides guidance and support for performing closure surveys. The RSO or HQ DLA ensures the statistical analysis of the survey and data performed and documents in a final status survey report. Include the subjects in the final status survey report:
 - a. Executive summary
 - b. Site history
 - c. Radionuclides of concern and typical concentrations
 - d. Description of survey instruments, methods, and detection ability
 - e. Discussion of survey results
 - f. Copies of instrument quality-control data and calibration sheets
 - g. Copies of survey data sheets
 - h. Copies of the statistical analysis of the data
- 29. <u>Transportation of Radioactive Materials</u>. The DLA RPO ensures all shipments of radioactive materials surveyed under Title 49 CFR, Part 173 and Title 49 are within acceptable limits for contamination and radiation levels.
- 30. <u>Packaging and Labeling</u>. Pack and label under Title 10 CFR, Part 71 and Title 49 CFR all radioactive materials, except where specifically exempt by Title 10 and Title 49 CFR.
- 31. <u>Shipments of Radioactive Materials</u>. Radioactive materials may combined with other compatible cargo to economize on shipment cost. Combine no radioactive materials in the same car, bus, truck or aircraft containing food, animals, explosives, photographic film, supplies, or pyrotechnic materials. DLA organizations shipping radioactive material needing DOT radioactive labels, Yellow III, will:

- a. Tell the receiver by electronic message at least 24 hours before arrival of radioactive material (report of shipment). Shipments sent with a 24-hour transit time need the shipper to tell the receiver by telephone on the day of shipment.
- b. Note on the Data Dictionary (DD) Form 1348-1A, DoD Single-Line Item Release or equivalent, and Shipment Planning Worksheet with the following message: "Warning, ensure loading compatibility with other DoD Hazard Classes."
- 32. Motor Vehicle Shipments. Shipments of radioactive material by motor vehicles will:
- a. Prepare a DD Form 836, Dangerous Goods Shipping Paper or Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles or Containers or Vessel.
- b. Prepare a DD Form 626, Motor Vehicle Inspection for the shipments of radioactive material packages needing a Radioactive Yellow III.
- c. Physically secure vehicles dedicated with radioactive material to prevent tampering or unauthorized removal of radioactive material. A competent employee controls access to, or entry into, the vehicle. Control vehicles obligated with radioactive material in an uncontrolled area.
- d. The U.S. Postal Service (USPS) restricts shipping of radioactive material except as prescribed in Title 39 CFR, Parts 123 and 124, and USPS Publication 52, Part 370. The RPOs coordinates all shipments that might use the USPS.
 - e. Tell the RPO when scheduled outbound shipments delay over 24 hours.
- f. Report to the RPO of all surveyed all incoming shipments of radioactive material as needed by Title 10 CFR and HQ DLA official guidance.
- 33. Receiving Shipments. Ensure all receiving areas have an SOP for the receipt of radioactive packages under Title 10 CFR, NRC license needs, and NRC Regulatory Guide 78.3, Procedures for Picking Up and Receiving Packages of Radioactive Material. When packages containing radioactive material improperly labeled, or damaged under CFR Title 10 or CFR Title 49, prepare a Standard Form 364, Report of Discrepancy (ROD).
- 34. <u>Disposal of Radioactive Material</u>. Transfer radioactive material to only approved individuals for disposal. Serviceable items containing radioactive material transfers only to individuals holding a valid NRC, NRC agreement state license, or under with Title 10, CFR. Disposed of items containing radioactive material incapable of reutilization and coordinate the disposal with the HQ DLA RSPM.
- 35. <u>Decontamination Procedures and Methods</u>. Get the necessary equipment, materials, training, and personnel to ensure readiness to conduct decontamination. Decontamination Guidance:
 - a. Personnel.

- (1) Remove most of the external contamination by carefully removing the individual's clothing.
- (2) Immediately flush with water any skin contamination involving caustic, corrosive, or organic-solvent solutions, and collect washings. Water and a mild soap are effective at removing contamination from the skin.
 - (3) Decide the extent and size of the contamination using personnel survey techniques.
- (4) Document survey results. Repeat decontamination procedure no more than two times.
- (5) Get help from medical personnel if decontamination of eyes, ears, nose, and mouth or if extra needed decontaminating chemicals.
 - (6) Assess the need for bioassay for potential internal contamination.
 - (7) Examine to decide how the contamination occurred.

b. Equipment.

- (1) Control access to contaminated areas.
- (2) Provide personnel protection for workers.
- (3) Evaluate decontamination needs.
- (4) Get the necessary equipment and materials.
- (5) Survey all items to released to an unrestricted area.
- (6) Begin with the mildest decontamination methods and progress to harsher, abrasive, or caustic methods, as needed.
 - (7) Work from the outside contaminated area to the inside.
 - (8) Isolate all clean areas from contaminated areas.
- (9) Minimize the generation of contaminated liquids and airborne radioactivity during the work.
- (10) Survey between decontaminations (between successive applications of each technique).
- (11) Continue to decontaminate until contamination levels reduce to acceptable levels for release to unrestricted area.
 - (12) Keep needed documentation.

- 36. <u>Emergency Procedures</u>. Develop and carry out formal emergency plans and procedures for all DLA organizations where radioactive material handling, stored, used, delivered, and disposed of, regardless of quantity. The scope of the emergency plan depends on the potential hazards of the maximum credible accident and other postulated accidents. Topics developing an emergency plan:
- a. The kinds of radioactive materials potentially released (so responsive surveying instrumentation can identify).
- b. The most important exposure pathways for these types of materials (the effect on the local population).
 - c. A definitive area (emergency planning zone).
- d. The potential duration of a release and the time available before exposures off-site are significant.
 - e. Warning procedures.
 - f. Response actions.
 - g. Assessment actions.
 - h. Correction actions.
 - i. Protective actions.
 - j. Emergency control centers.
 - k. Medical treatment buildings.
 - 1. Assembly areas.
 - m. Communication equipment.
 - n. Surveying equipment.
 - o. Aerial surveying.
 - p. Dosimeters.
 - q. Transportation.
 - r. Off-site agreements and support.
 - s. Training staff and emergency response personnel.

- t. Conducting emergency drills.
- u. Preserving and inventorying emergency equipment.
- v. Reviewing and updating plans and procedures.
- 37. <u>Radiological Support</u>. Get support from the correct agencies or DoD for emergency planning for those DLA organizations that do not have the resident assets to handle an identified credible accident and or incident.
- 38. Industrial X-Ray Buildings. Industrial X-ray equipment comply with the following:
- a. The industrial radiographic equipment classified, under the National Institute of Standards and Technology (NIST) Handbook No. 114.
- b. Approved and review physical shielding needs by a qualified expert. The RPO keeps a record of the shielding evaluation of the Industrial X-Ray building.
- c. SOPs for the industrial radiographic equipment be under the hazard classification prescribed in NIST Handbook No. 114.
- d. Personnel monitoring be under with DLAI 4113, Personnel Dosimetry and Recordkeeping to Occupational Exposure to Ionizing Radiation.
- e. Needed warning signs post at the perimeter of the control area of the industrial radiographic building.
- f. Show the area around the industrial X-ray building as a restricted area. Only approved personnel can occupy this area during X-ray procedures.
- g. Ensure all industrial X-ray equipment comply with the radiation safety needs prescribed in NIST No. 114.
- 39. <u>NonIonizing Radiation</u>. Restrict the use all Nonionizing radiation such as lasers and other high intensity optical sources, microwaves, radio frequencies, and ultrasounds as applicable.
- 40. <u>Laser Safety</u>. Technical Bulletin (Medical) 524 governs Laser Safety.
- 41. <u>Commanders</u>. Commanders of DLA organizations ensure that such equipment producing radiation has an evaluation performed for potential health hazards by a Health Physicist and or by an individual or organization qualified to perform radiological hygiene services. Commanders of DLA activities will:
 - a. Published and enforce SOPs.
 - b. Specify safety policies on the equipment.
 - c. Control moving of personnel to minimize their exposure.

- 42. <u>Laser and Radio frequency Radiation Exposure Incidents</u>. Laser and radio frequency radiation exposure incidents, reporting procedures, and registry maintenance be under Army Regulation 385-10, Army Safety Program.
- 43. <u>Reporting NonCompliances</u>. Commanders report noncompliance or Safety Defects under the terms of Title 10 CFR, Part 21. These documents, and or a memorandum where the locations are for these documents; and posted in a visible area where radioactive material stored, handled, delivered or disposed of, for all NRC licensed DLA organizations.
- 44. <u>Suspected Defect or NonCompliance with Title 10 CFR, Part 21</u>. Quickly evaluate suspected defects or noncompliance with Title 10 CFR, Part 21 to decide if a safety hazard exists. The evaluation cited in NUREG No. 0302 (Rev. 1) will decide if a safety hazard exists. Copies of NUREG 0302 (Rev. 1) available from National Technical Information Service, Springfield, VA 22161.
- 45. <u>Notices</u>. Commanders of DLA organizations comply with needed notice, as listed in Title 10 CFR, Part 20.
- 46. <u>Decontamination</u>. Survey personnel for beta and gamma contamination suspected of external contamination with radioactive material. In an emergency, providing life and limb-saving medical support takes precedence over decontamination. Institute and complete decontamination procedures and methods at all DLA organizations storing or use radioactive material. Select procedures and methods for use in particular circumstances depending on the type, extent, and location of the contamination. The general approach follows:
- a. Watch for any physical effects of the contaminated person, such as bleeding, irregular breathing rate, burns, or shock.
- b. Assess the extent of any injuries; medical treatment of injuries always takes precedence over decontamination.
 - c. Survey for contamination, both external and internal under with the emergency plan.

GLOSSARY

PART I. ABBREVIATIONS AND ACRONYMS

ALARA As Low As Reasonably Achievable ARPO Alternate Radiation Protection Officer

CFR Code of Federal Regulations

DD Data Dictionary

DLA Defense Logistics Agency

DLAI Defense Logistics Agency Instruction

DOT Department of Transportation DPW Declared Pregnant Worker

GOCO Government Owned Contracted Operated

HMIRS Hazardous Material Information Resource System

HQ Headquarters

J-3 Defense Logistics Agency Logistics Operations
NIST National Institute for Standards and Technology

NRC Nuclear Regulatory Commission
NUREG Nuclear Regulatory Guide
LLRW Low-Level Radioactive Waste
OCONUS Outside the Contential United States

PFLA Primary Field Level Activity

RHPP Radiation Health Protection Program

ROD Report of Discrepancy
RPO Radiation Protection Officer
RSO Radiation Safety Officer

RSPM Radiation Safety Program Manager

SOFA Status of Force Agreement SOP Standard Operating Procedure

USADC United States Army Dosimetry Center

USPS United States Postal System

PART II. DEFINITIONS

ARPO. An individual who serves as an alternate to the radiation protection officer and assigned the responsibility for the oversight and management of the radiation safety program at that organization.

RPO. An individual who serves as the primary the radiation protection officer and assigned the responsibility for the oversight and management of the radiation safety program at that organization.

RSO. A person at the DLA PLFA assigned the responsibility for managing the radiation safety program for that PLFA.

